THE WOOL PRESS

May/June 2021 Volume 329

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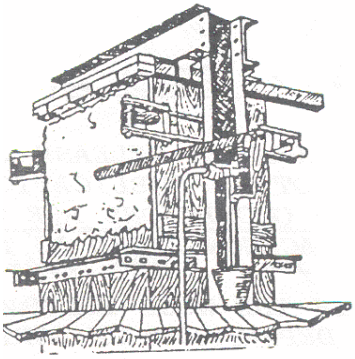

Edited By Merrie Ellis
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EDITORIAL

It's been an emotional time since our last edition, we have said goodbye to our much loved and respected team member Tracy Evans, who will be sorely missed by the DoA as well as the wider community; we have said hello to baby Dominga Garces-Baigorri who arrived on the 16th May. We have also said goodbye to SAA Tom McIntosh and Wool Corer, Nathan Wenn, whom I would like to thank for all their hard work over the past couple of years, and wish them well with their next adventures back home in Australia.

You will see on the pages of this Wool Press a comprehensive overview of business at Saladero, and I know the future of Saladero and the National Stud Flock has been on people's mind. Most importantly, I would like to reassure you that we have plans in place to continue to operate Saladero as it is now and we hope to have this cover in place for the next 12 months. We are also hoping to complete the review of the National Stud flock and the role of Saladero as a research base in the coming months (including a session on this at Farmers Week). As you will be aware we are consulting widely and a final proposal will go to Executive Council in due course, following passage through the AAC.

Finally, after an absence of 2 years, in particular the "lost year of 2020" it is great to see the RBA Farmers Week event back on in full, with a packed agenda (also contained in this edition of the WP). DoA and the Veterinary section will have a number of slots on Wednesday and will overlap into some of the other sessions as appropriate. You may have noticed a bit of a different approach from us for this year, it's time for a DoA business plan that is fit for purpose for the Falklands as we are, that provides a robust pathway that won't be de-railed by the next great idea. We appreciate this might be a bit contrary to previous approaches taken, but after a number of cycles and probably enough reports on the shelves of the library to keep us going for a lifetime, we think a different approach is required. We very much look forward to some open and healthy discussion with you all over the week.

Dr Andrea Clausen
Director of Natural Resources

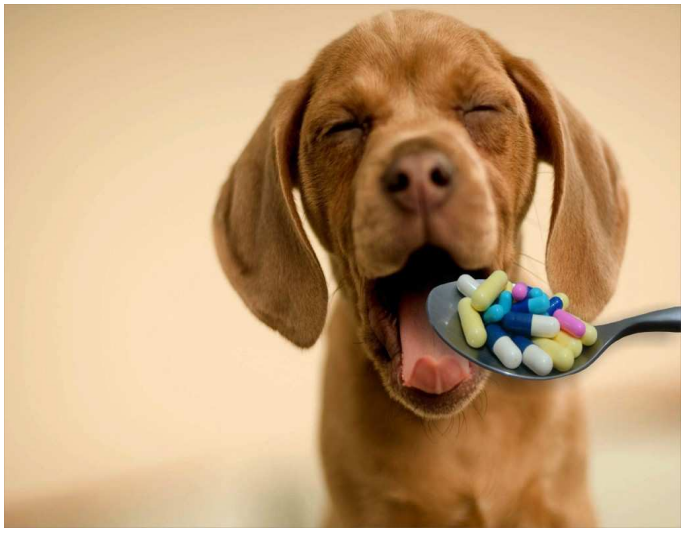
DOG DOSING DATES FOR 2021/2022

Date	Drug
~~Wednesday 6th January 2021~~	~~Drontal~~
~~Wednesday 10th February 2021~~	~~Droncit~~
~~Wednesday 17th March 2021~~	~~Droncit~~
~~TUESDAY 20th April 2021~~	~~Droncit~~
~~Wednesday 26th May 2021~~	~~Droncit~~
Wednesday 30th June 2021	Drontal
Wednesday 4th August 2021	Droncit
Wednesday 8th September 2021	Droncit
Wednesday 13th October 2021	Droncit
Wednesday 17th November 2021	Droncit
Wednesday 22nd December 2021	Drontal
Wednesday 26th January 2022	Droncit

Regular weighing - it is important to keep a check on dog's weights to ensure correct dosage is being given.
All dog owners are responsible for worming their own pets. Please remember to contact the Veterinary Office and confirm this has been done. After normal working hours, please leave a message or email.

The Falkland Islands Government

Department of Agriculture,
Veterinary Service,
Tel: (500) 27366 Facsimile: (500) 27352
E-mail: sbowles@doa.gov.fk



SEEN ANYTHING STRANGE LATELY??

IF SO CONTACT THE DEPARTMENT OF AGRICULTURE ON 27355 OR VETERINARY SERVICES ON 27366

Bargains Galore
Have a lot of books!
Would you like any sent to your farm?

DATES FOR YOUR DIARY

14th June - Liberation Day
5th - 9th July - Farmers Week

If you have a favourite recipe that you would like included in the Wool Press email it to vetreception@naturalresources.gov.fk

It is with great sadness that our little 'ginger wild flower' Tracy passed away on Friday 14th May surrounded by family and close friends.

Tracy was a huge part of the team at the Department of Agriculture and will be greatly missed by all. The little one with a big attitude and strong personality will always be with us in spirit and will no doubt be making sure that we are doing things correctly especially the Agricultural Returns!!

Rest in peace Tracy and our heartfelt sympathy goes out to all Tracy's family at this sad time.

SALADERO NEWS

By Andrew Bendall

April - May 2021

Weather! As this article was being written in late May, the Falklands were experiencing an earlier than usual dump of snow followed by very cold but relatively still weather, with daily snow showers.

Albeit picturesque for the first few days and providing much needed soil moisture and the added bonus of the snow containing nitrogen. But the longer these weather events hang on it emphasises the need to have contingency plans to mitigate the possibilities of loss of stock.

Breeding Flock Ewes body weights & condition scores, leading upto and at joining.						
Ewe Weights summer & Autumn 2021	January		April		May (Joining)	
	Weight	BCS	Weight	BCS	Weight	BCS
MA Ewes	50.3	2.6	51.4	2.7	53	2.9
2018 Born Ewes	45.7	2.6	47	2.8	49.5	2.9
2019 Born Shearlings	29	2.1	38.2	2.4	42.5	3

Preparation!
2021 lamb crop, what's it going to be? Well without knowing what our ewe condition is we can only hope for something like last year depending on weather.

As seen above all the ewes had been weighed & conditioned scored pre joining and again at joining, all ewes (excluding the 2018 born ewes) that did not rear a lamb have been culled along with any poor condition ewes plus any that were not structurally sound.

The 2018 born ewes, that were mated as shearlings but didn't rear a lamb have been given a second chance.

Faecal samples were taken 10th May from the entire mob comprising of both younger ewes and older ewes, with an average worm egg count of only 257 epg nothing was drenched a week later at joining.

The encouraging pattern with the management of the ewes is that from January to May they have been gaining both weight and body condition, far more important in my opinion is that the body condition is increasing and hopefully that will continue through the next six weeks. (the snow may have put a halt to that)

The ewes have been selected into 6 joining mobs, each mob assigned to a team of selected sires. This is done using a computer program called "matesel" with the aim of lifting the potential productive worth of all progeny born rather than taking a selective or corrective approach to join-

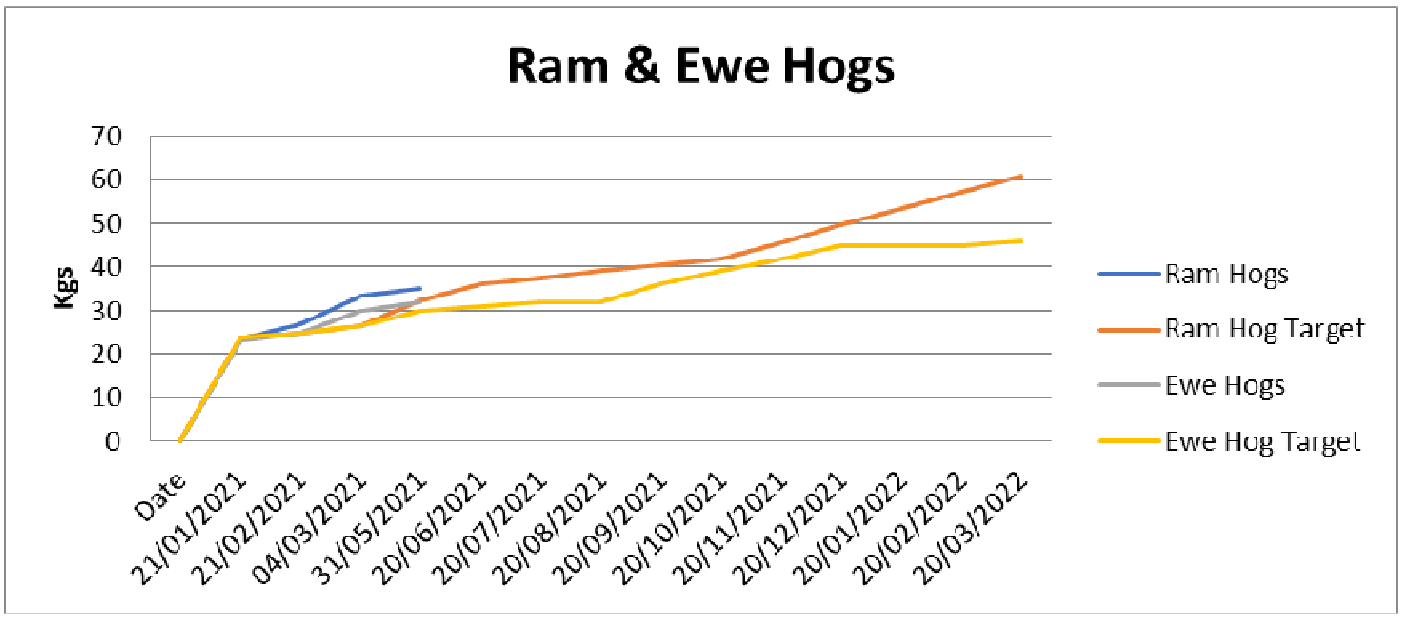
ing scenarios. It also minimises any inbreeding while trying to get as random group of ewes per ram team as possible. This way you can see the true worth of a ram's ability to not only lift productive worth amongst top index ewes but ewes across the entire index spectrum.

We have again this year used a Blue Beach ram with a group of 55 ewes, he's a 2017 born ram which has been used within the Blue Beach fully recorded Stud Flock, thus improving our inter - flock connectedness which in turn allows for better comparison to be made not only between the two flocks but across the entire Australian recorded merino flocks.

Last year after much debate we only joined some of the shearling ewes which did perform relatively well. This year we have joined the entire crop of the shearling ewes and we'll wait and see what is in lamb and then compare that back to weight and body condition. Yes there are some shearlings that potentially should not have been mated but with such a small flock and for ease of management it was simplest to join the lot.

Post Weaning Management of Lambs (Hogs);

Young Stock – The forgotten age group, yet they represent our future production and income!



As has been written in the previous two wool presses, here's quick summary of the hog's performance over the summer and autumn.

- Lambs weaned 21st Jan (70-105 days old at 23.6 kg)
- All lambs doing above 120 grams a day weight gain in February
- March saw these gains drop to an average of 100 grams a day
- All lambs drenched at weaning (21st January) and again in late February.
- All will have individual fecal samples taken early June & drenched.

Continued on pages 6 & 7

The graph below represents the weight gains made over the last 6 months of the hogs.

Worm Burden

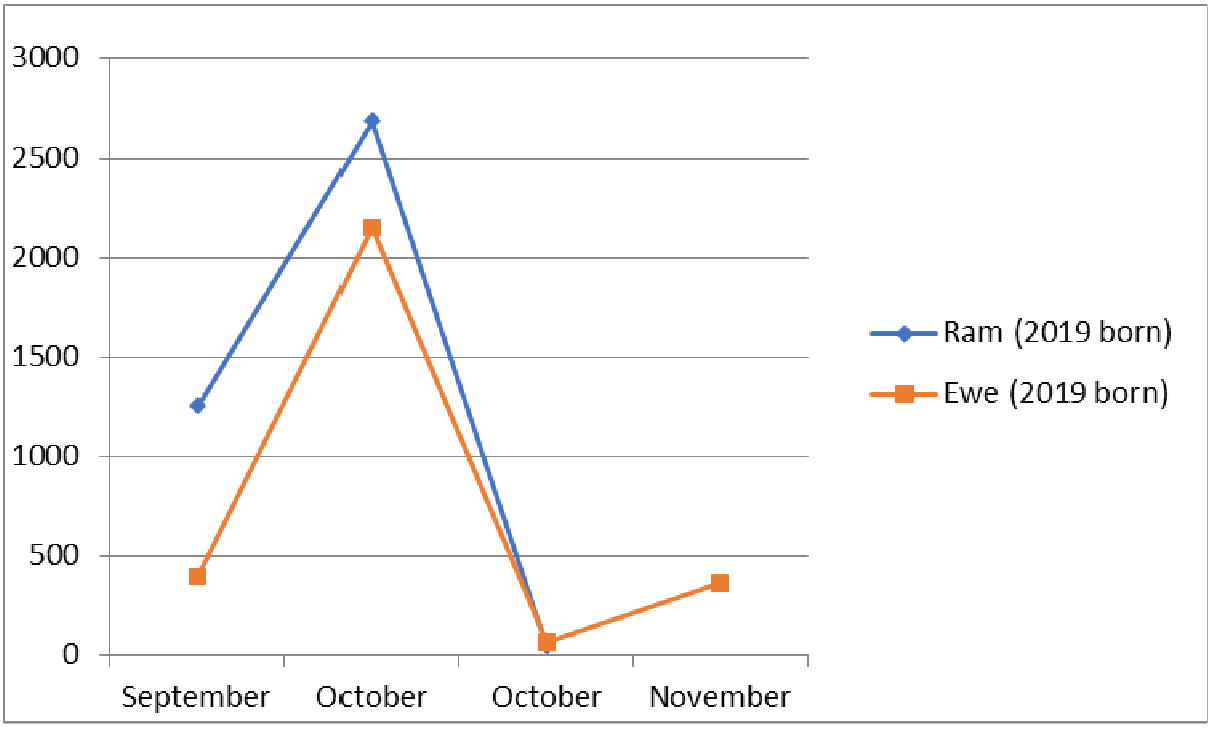
I have written in previous articles, the challenge that camps contaminated with infective larvae can cause. We have seen through monitoring considerable build-up in hogs grazing the greens within the larger camps. As illustrated below this became a significant issue with epg counts of over 2000, at this level there will be an effect on growth rate plus that they are contaminating the greens which will then become a hot bed of infected larvae for young lambs in the summer.

Graph 1, illustrates the measured worm count amongst both the ram & ewe hogs over the spring last year.
They were individually samples at that high point and drenched. However we are seeing two things at work here amongst the group of rising shearlings. Resistance and Resilience.

Resistance, being where the animal is killing the worms within its body system and not contaminating the pastures with high worm counts in its manure. But most often this is done at the expense of both growth rate and wool growth. Which is why, sometimes a mob can record a very low worm count but look terrible. On the other hand you have a resilience animal that will just ignore the presence of the worms as they travel through the gut system and continue growing. Needless to say the "holy grail" is an animal that is resistant while still performing very well productively.

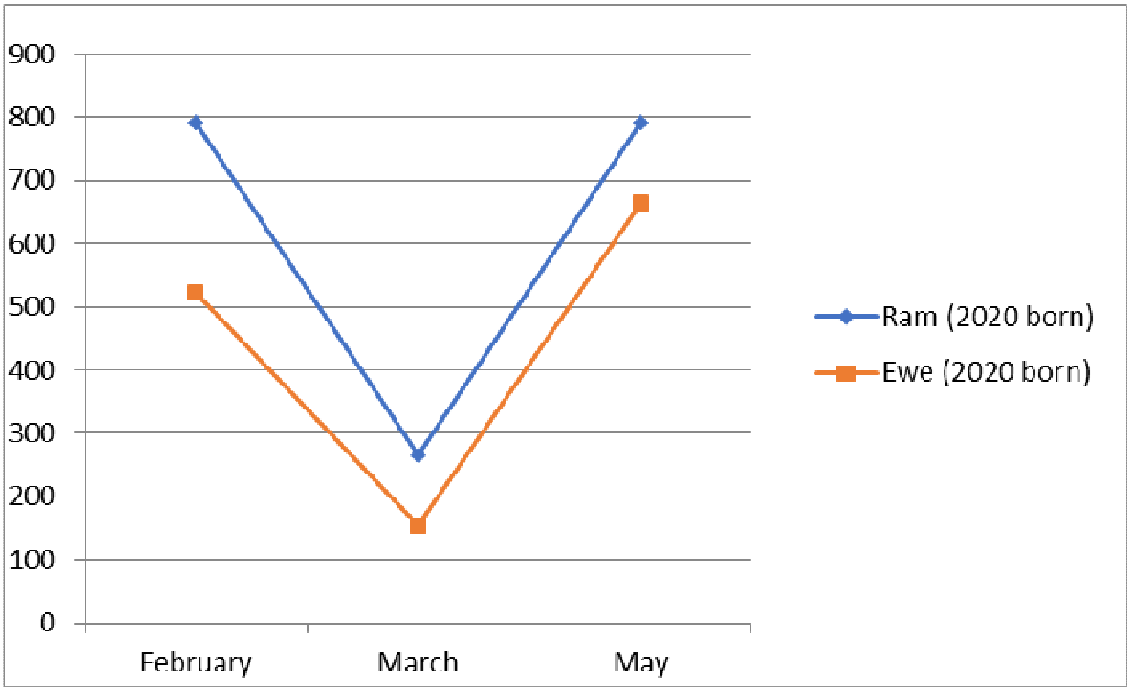
This is why there are individual samples taken from them all to enable us to see if there is any sire/genetic effect on their performance.

Graph 1.



Continued on pages 8 & 9

Graph 2, Illustrates worm burden over the summer amongst the young lambs.



Below is a piece take out of the New Zealand “Worm Wise Booklet” more relevant information can be found on the link below:

https://beeflambnz.com/knowledge-hub/search?term=worms&field_topics=65&type=module

Survival of eggs and larvae

The development of worms from an egg through the larval stages requires a moist environment and occurs at a different rate at different temperatures. At low temperatures development is slow, whereas in warmer temperatures it is faster. A temperature of 20-25°C is optimal for larvae, as they die at higher temperatures due to desiccation (loss of moisture or dehydration).

Most developing eggs and larvae are killed by hot, dry weather, and most eggs on pasture die during cold weather (average air temperature less than 10°C). Some larvae survive through winter, also known as “overwintering”, and together with new eggs shed by animals in early spring, this initiates the build-up in worm numbers.

Infective larvae (L3) are relatively hardy. Once the larva has reached the infective third stage (L3), temperature and moisture will determine how long it survives.

Infective larvae on pasture eventually die as they cannot feed and have to survive on stored energy. In cooler temperatures larvae can survive for up to eight months and in some cases for more than a year. In warmer temperatures larvae may survive only two or three months. Naturally, the longer pasture is left or spelled without grazing animals, the fewer infective larvae it will contain. The length of time this takes will vary, as it depends on climatic factors.

The type of pasture can also affect the rate at which dung pats dry out and eggs and larvae die. Some open sward pasture species provide a less suitable environment for larval survival than those with a dense thatch.

Most larvae are found in the first 2cm of pasture height or in

the first 1cm of soil. When animals graze pasture with longer grass they are likely to be taking in fewer worm larvae than when they graze pasture with shorter cover.

Intensive grazing exposes animals to a higher level of larval intake than animals lightly grazing the same pasture. Amounts and patterns of dung deposition, and therefore numbers and distribution of parasites on pasture, will vary with the type of grazing management.

The prepatent period

Typically it takes around 21 days from when a sheep ingests a worm larva to when worm eggs appear in dung samples. In a few species, it takes slightly longer. This is called the prepatent period.

It is important for two reasons:

- The commonly recommended interval of 28 days between drenches in young stock is aimed at minimising pasture contamination with worm eggs.
- Worm egg counts provide, at best, a 'picture' of the levels of larval challenge on pasture, three weeks prior to measurement. You may therefore think sheep are free from worms but, under the right conditions, they could have picked up a considerable burden. Obviously, if a sustained action drench was used, the period from drench to eggs appearing in the dung is longer, i.e. the length of action plus the 21 day prepatent period

Seasonal patterns of larvae on pasture

Larval numbers on pasture are generally highest in late spring and autumn. This is because worms complete their life cycle fastest in warm, wet conditions. Many developing eggs and larvae are killed by hot, dry summer weather and fewer eggs develop in the colder temperatures of the winter months. The mild, moist conditions of spring and early summer are ideal for larvae, so their numbers on pasture increase. Numbers build up through summer and early autumn but drop off if hot, dry weather occurs.

Danger periods extend from spring to early winter; extreme danger occurs from March to July. This will vary across the country according to the climatic conditions.

The number of eggs and larvae present on pasture is much higher than the number of worms inside animals. Generally, when conditions are favourable, 85–95% of the worm population will be found in the soil or on pasture and the remaining 15% are elsewhere (animals, faecal pats). It is very important to remember this when planning worm management. Simply killing worms in the animal is only a part of the overall strategy to minimise exposure of animals to worms at crucial times.

Saladero Management;

While the DoA is in the process of employing an interim stock manager, FLH is providing through Macaulay Davis where practically possible to cover three days a week employment. He will be working alongside the DoA staff throughout this time.

By Lucy Ellis

Two staff members of the Department of Agriculture, Lucy Ellis and Andrew Bendall, took part in the 90th Annual International Wool Textile Organisation's (IWTO) Congress which took place between 17-21 May 2021. As the meetings were all fully digital, owing to covid ,and were based in Brussels it meant we had some very, very early starts, the earliest being 3.30am!

The DoA also sponsored one day of the Congress and as a results not only was the DoA logo displayed on each presenters background, it is now in a loop on the IWTO website alongside some very big industry players, see below taken off their site:

It was a fascinating week of Committee meetings, Working Group meetings, presentations and discussions covering all aspects of the global wool industry with presenters from all over the world.

There were some very clear and strong messages that came across during the week: two being sustainability and wellbeing—these subjects came up time and again across all sectors with varying positive and negative connotations. In the Sustainability session, Dave Maslen of ZQ^{RX} said 'Consumptive Guilt' is the new phrase consumers are saying due to the issues of climate change. Dave said that we, the wool industry, could turn this around so consumers are a tool for good. Along with a new 'regenerative mind-set' these are new ideas to drive for change, and change now but it has to backed with sound data and science.

Also in this session there was discussion that farms are actually both an emitter and *storer* of carbons, this story has not been told and needs to be expanded to counter the vegan movements and other claims that farming activity is destroying the planet. As most of our land here is peat based we have a fantastic story to tell. Lake Hawea Station in New Zealand is the 1st farm in the world to be certified carbon negative, certified by a totally independent outfit called Toitū Envirocare which is: 'a team of scientist and business experts who have come together to protect the ecological and economic future of this place' and their company slogan is:' Our origins are in science; our future is in environmental regeneration and economic sustainability.' Look them up here: About Us | Toitū Envirocare (toitu.co.nz)

New feed additives which reduce methane emitted by farm animals are still in the trials stage but the outlook of success is good.

Another really interesting talk came from a company that takes the dags/any other low grades wool and turns it into garden pellets (slugs and snails don't like it), it also helps with water retention, soil porosity and slow release of nitrogen—what's not to like!

The one cautionary note that made a big impression was all about the EU's Product Environmental Footprint (PEF) Guide. In fact it got an utter slamming from a lady called Veronica Bates

Kassatly who is an independent analyst for data-based sustainability claims. She basically said PEF was unfit for purpose as was the Higg Index MSI scoring system for textiles, wouldn't like to interpret her words as saying the Guide was corrupt but it was pretty close! Simon Cotton of Johnston's of Elgin, Scotland also said of the Higgs Index that it was weighted in favour of oil producers who have a heavy influence on certain outcomes and wool comes a very poor second, at best. PEF methodology final draft.pdf (europa.eu)

The issue is that there is an increasing pressure on "Truth & Transparency" when it comes to validating claims on labels etc and it is vital to get the facts right on the data around carbon neutrality as using a generic database for scoring environmental footprints of retail products and apparels can be twisted to suit.

When looking at the textile market in general there is a real emphasis on: natural, renewable, recyclable and biodegradable. Consumers, especially the next generation, are looking for products that have a proven track record of "caring for animals and the environment". Another new phrase being newly bandied about is LOHAS—Lifestyle of Health and Sustainability which depicts conscious consumerism and is growing rapidly. *https://en.wikipedia.org/wiki/LOHAS*

Interestingly, there is a big push in innovation in wool into the health and wellness sector with textile groups and individuals trying to place wool here as well as in the sports market. Beds and bedding as well as furniture such as sofas were very much at the forefront with this discussion as sleep and sleep deprivation is a big cause of ill health and it is a well known fact that sleeping on a wool mattress is very good for you plus it is healthier if you suffer from any skin ailments.

Overall, the message that we took from the Congress was that wool, as a natural fibre in the market place, was doing okay but could be doing so, so much better. We all have amazing stories to tell regarding our farms and environment plus we, here, also have a head start with negative or neutral carbon emissions with our peat based land, very little cultivation and basically organic production sytems—we just have to get that story out there….

The above are just a selection of the talks during the Congress, there was so much more that it would fill a couple of Wool Presses all by itself. However, if you would like information on specific speakers or organisations, please give either Andrew or myself a call and we'll do our best to get it to you. In the meantime, take a look at these:
International Wool Congress 2021 Goes Digital | IWTO
Wool & Sustainability News | International Wool Textile Organisation (iwto.org)

Reminder: Annual Import Permits expiring soon

If you have an **annual** import permit for the import of Plant Material or Food of Animal Origin (FOAO) from non-EU approved establishments, please remember to renew it by **1st July 2021**

For an application form, please apply to biosecurity@naturalresources.gov.fk or call 27355

Copper in sheep

By Zoe Fowler

To finish up the series of articles about trace elements we'll take a look at copper. The metabolism of copper is complex and some deficiencies are not actually the result of copper being low in the diet but by other minerals interfering with the copper that is available.

As with most other trace elements copper is involved in many biochemical and physiological processes. Copper deficiency decreases the activity of several copper containing enzymes, one of which is involved in the building of myelin sheaths around nerve cells. This is why one of the main signs of copper deficiency is swayback (enzootic ataxia – where lambs go off their back legs). Myelination of nerve fibres occurs during 2 periods of development, one in late pregnancy and one 4-5weeks after birth. The lesions in the brain and spinal cord that cause swayback therefore become apparent immediately after birth or can be delayed until the lamb is a couple of months old. Copper deficiency also causes abnormalities in bone growth and poor mineralisation of the skeleton and so increased leg fractures can be seen in lambs. In adult sheep immune function and fleeces are affected (among many other things) by low copper levels.

Dietary copper is poorly absorbed from the intestine (only about 5% that is ingested is available) and many physiological and dietary conditions influence absorption. Once copper enters the bloodstream it becomes loosely bound to albumin (a protein) and amino acids and is transported to the liver (the main copper storage organ) where it is incorporated into copper-containing proteins such as ceruloplasmin, or stored in association with other substances called copper- metallothioneins. It is in this form of caeruloplasmin that copper is transported from the liver to all other tissues.

Liver copper levels in healthy livestock vary widely depending on dietary intake and normal levels are reported to be 700-5400umol/kg of fresh tissue. When copper intake is inadequate the liver stores are used up to maintain serum copper levels and the copper in the liver can fall to under 95umol/kg fresh tissue. Because these liver stores are depleted first tissue samples provide a useful index of the copper status of the previous diet and longer term status but not necessarily the current functional copper status at critical sites (eg circulating levels). Normal serum copper levels in animals fed adequate copper range between 9-19umol/L. Copper levels in serum are considered deficient if the level is <4.5 umol/L, considered marginal if 4.5-8.0 and adequate if over 8.0umol/L. At the other end of the storage scale, the liver can store copper well in excess of immediate metabolic needs, so there is only a loose relationship between high liver copper concentration and that of circulating copper in the serum, however usually if fresh tissue copper is over 100umol/kg then serum concentrations are normally adequate and over 8.0umol/L. It is generally accepted that liver copper concentrations are highest in autumn and lowest in late winter and early spring and this makes sense given that pastures are likely to be better over spring and summer. However, animals grazing pastures containing adequate copper (6-10mg/kg DM) may show signs of copper deficiency due to high levels of molybdenum in the presence of sulphur. The use of fertiliser containing lots of molybdenum will greatly increase the molybdenum levels of the pasture and the copper:molybdenum ratio of a pasture should be kept >5 to ensure molybdenum levels are not interfering with copper bioavailability. The copper/molybdenum/sulphur interaction occurs in the reticulorumen where sulphide ions react with molybdate ions to form thiomolybdates which then react with copper to form insoluble copper thiomolybdates which are not absorbed from the small intestine but are excreted straight out in the faeces. Furthermore a proportion of thiomolybdate ions are absorbed into the bloodstream where they interfere with copper metabolism in the liver. They reduce the synthesis of copper proteins like ceruloplasmin and the activity of other enzymes such as superoxide dismutase, a copper and zinc containing enzyme used in fighting free radicals. Sulphur levels in natural pasture do not tend to vary much so unless there is a lot of sulphur containing fertiliser used or sheep are supplemented with sulphur it tends to be the varying levels of molybdenum that cause the problem. High molybdenum in the presence of low/normal sulphur affects copper less than high molybdenum alongside high sulphur. Feeding diets high in iron and zinc can also decrease copper absorption.

There can be large variation between animals in copper tissue levels and clinical signs. So you need to sample enough animals to get a group average (at least 10) and be aware of the time of year that you are sampling. Sampling in autumn is sensible as this tells you the 'best' that tissue levels might be - if animals are deficient then they are almost certainly going to need over winter supplementation. The presence of some nematodes can reduce hepatic retention of copper. If you have clinical signs, almost certainly tissue levels will be low, but low tissue levels do not always cause clinical signs.

Where deficiency has been diagnosed the timing of supplementation is important. Young animals are particularly sensitive to copper deficiency so supplementing the dam during gestation ensures that offspring will have adequate copper status at birth. Copper readily crosses the placenta but doesn't get secreted in milk well at all so supplementing pregnant dams during pregnancy is much better for foetal copper levels than supplementing lactating ewes.

Supplementation can be by topdressing pasture or treating animals with oral drenches, intraruminal boluses or injection. It is very important to know that your flock is deficient before supplementing as excess copper intake can lead to toxicity (especially so in sheep). Chronic copper poisoning from excess cumulative supplementation or feeding of high copper diets (that are also low in molybdenum) or acute copper poisoning from accidental overdose leads to dull, jaundiced animals that are excessively thirsty. Death can result unless drenching with molybdenum helps.

When including copper in your trace element profile you get several different measurements which can help determine whether you have an overall copper deficiency or if there are high molybdenum levels causing the problem.

Caeruloplasmin (CP) is a copper containing enzyme and the form in which most copper is transported about the body in. CP carries 70-80% of the copper that is found in the blood stream. CP can be elevated in acute phase immune/stress responses.

Plasma copper: Plasma copper is the total of all copper in blood and includes that percentage that is incorporated into CP. Plasma copper is measured to compare it to CP in a ratio. If there is excess molybdenum binding copper the CP: plasma copper ratio is decreased either by increasing the plasma copper (as a reflex attempt to increase free copper) or by decreasing CP activity. This ratio is only valid if the plasma copper level is over 6umol/L – a plasma copper of 6 or lower shows that you have a genuine copper deficiency.

CP:plasma copper ratio: This gives an indication of thiomolybdate effects on blood. Thiomolybdate will decrease CP activity without necessarily lowering plasma copper. A ratio of approx 2 is achieved in the absence of a thiomolybdate problem, as the ratio decreases this indicates thiomolybdate challenge. A ratio of 1.7 indicates a thiomolybdate challenge and below 1.5 = a serious molybdenum problem. High ratios are often found if there is an active acute phase response (as CP will be falsely raised). So this ratio is only valid in normal (and marginal) plasma copper ranges.

Superoxide dismutase (SOD): is a copper and zinc containing enzyme that is carried in red blood cells and is measured on heparinised whole blood. Red blood cells have a half-life of approx 6wks so levels of SOD can give an indication of a slightly more historic copper status. A high/normal SOD level with low plasma copper levels suggests that levels WERE adequate but are now declining.

ALL parameters should be interpreted together to get the full copper picture.

Have you seen this ladybird?

By Naomi Cordeiro

Harlequin ladybirds (*Harmonia axyridis) are considered the* "most invasive ladybird on Earth". Originally from Asia these creepy crawlies have made their way accidentally to much of Europe, South American and parts of Africa, and have even been deliberately introduced to North America.

Harlequins established in the UK in 2004 and are now widespread in England, spreading into Wales, Ireland and Scotland. So far we've only caught a few in the Falklands that have come in on imports: from the UK in a box of apples and from South America in cauliflowers. To date we haven't seen any outside of imported produce.

The harlequins prefer to feed on aphids, as with other ladybird species, so can be considered a helpful addition to gardens. In fact, they were introduced to the USA as a biological control for aphids. From their first introduction to the US in 1916, it took until 1988 for a population to establish in the wild. Since then they have rapidly invaded the continent, numbers have increased exponentially and the harlequin has quickly become the most abundant ladybird in a wide range of habitats.

The concern is that harlequin ladybirds not only eat aphids but will also feed on many other things including other native ladybirds and insects. In the UK they have also been blamed for pushing native insects out of their natural habitat as they compete for resources. The concern is if they got into the wild in the Falklands, they could do the same here.

What to look for

Adult harlequin ladybirds are pretty difficult to distinguish from our local ladybird but there are some key differences if you look closely. Harlequins are 8-10mm (3/4") in length, so bigger than the locals. They are however very variable in colour and markings. The two most common forms are black with two red spots or orange/red with 18 black spots. They often have a distinctive black "W" on their head and their legs are almost always brown, not black.

Harlequin ladybird larvae are black and orange reaching up to about 1cm (½in) in length. They also feed on aphids and other insects. Ladybird larvae all generally have the same elongated body shape and most are black or dark grey. Some have yellow or orange markings and some have hairs or spikes. The harlequin larvae is characterised by having two orange stripes and being spikey.

Two harlequin ladybird larvae attack another species

What can you do?

We'd really like to confirm that harlequins are not established in the Falklands but we need your help. If you think you have found any harlequin ladybirds please send them into the DOA. You can pop them in a container and post them or drop them up to the department and we will either identify them here or send them away to experts to confirm whether they are local or harlequins.

Three common colour variants of the **harlequin ladybird** (all the same species)

SEEN ANYTHING STRANGE LATELY??

IF SO CONTACT THE AGRICULTURAL DEPARTMENT ON 27355

Springcreek Conservation

SPRINGCREEK CONSERVATION'S

ECOLOGICAL RESTORATION GRANTS

GIVE NATURE A BOOST!

OUR GRANTS CAN HELP GET YOU STARTED OR GROW YOUR VISION

We have **grants of up to £7,000** for practical projects to benefit Falklands wildlife.

All ideas are welcome and we are especially interested in projects which advance larger-scale restoration, new techniques, or use a range or native species, and those which help and inspire others. Projects could include:

- Setting up nature areas and restoring their native habitats, including ponds, tussac, boxwood and bluegrass, by planting, management and fencing
- Trialling new methods of restoring eroded or disturbed ground with native species
- Producing native seed or propagating native plants
- Knowledge-sharing visits or training for land mangers or community groups

Grow for it! Closing date 19th July 2021. For application forms & further information, or to discuss ideas, phone 22247 or email Frin on habitatsrestore@conservation.org.fk

BirdLife INTERNATIONAL PARTNER

www.falklandsconservation.com

FARMERS WEEK
5th - 9th JULY

General information

- Non-members are welcome to attend Farmers Week for a daily fee of £20 with the exception of the ExPo which is free. This fee includes all lectures, presentations, any field trips, lunch and smokos.
- All meetings are in the Town Hall land all lunches & smokos will be in the refreshment room unless otherwise specified.

SUNDAY 4th July

EXPO

2pm-5pm, Town Hall

The RBA ExPo is free and open to the public.

This year's ExPo will feature exhibitions and stands from local businesses and organisations.

Please come to meet and chat to our exhibitors.

SUNDAY 4th July

1700-1800 RBA Committee meeting - Town Hall Committee only

MONDAY 5th July

0830 - 1000	RBA AGM - Members only
1000 - 1030	Smoko at IJS for those interested to view art work (under 11's)
1030 - 1035	Introduction & Welcome from Lewis Clifton Chair RBA
1035 - 1200	How can we help Falklands wildlife and agriculture survive the climate crisis? Presented by a selection of Farmers, DoA and Falklands Conservation
1200 - 1330	Lunch provided by the MOD - TBC
1330 - 1430	Tourism update - Panel of speakers Steph Middleton FITB, Sally Ellis ITT & Carli Sudder Sulivan Shipping
1430 - 1500	Smoko hosted by FITB
1530 - 1630	RDS update with the Steering Group
1900	RBA Party in Narrows Bar. Member & Invited guests only. Children welcome. £10 per member for tapas

Continued on pages 16 & 17

TUESDAY 6th July

0930 - 1030	Fire training at FIGAS
1030 - 1100	Smoko hosted by Stanley Tower
1130 - 1200	WoolCo Update
1200 - 1300	Lunch sponsored by Workboat Services
1300 - 1400	Transport update - FIGAS, WBS, PWD
1400 - 1500	Telecommunications - Sure & FIG Regulator
1500 - 1530	Smoko fundraiser for Camp Schools organised by parents
1530 - 1630	FIMCO Update
1900 - 2000 Leisure Centre	Five Aside Football Match West vs East

WEDNESDAY 7th July

0900	Introduction, Values, Staff/DoA, Services
1030	Smoko hosted by DoA
1100	Wether Trial, RWS & IWTO
1200	Lunch hosted by DoA
1300	Vets
1500	Smoko hosted by DoA
1530	Follow up on Monday ditching topic
1600	General discussion on topics during the day
1800 - 1930	Governors Reception Invite only
1930	Falklands Conservation Supper at Stanley Arms All involved in Farmers Week invited - TBC

THURSDAY 8th July

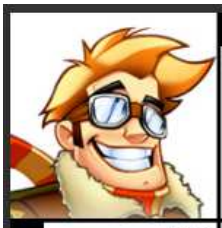
0900 - 0930	Wetlands Project - Steffi Carter
0930 - 1030	Ditching workshop - understanding and sharing experiences with drainage ditches with Steffi Carter
1030 - 1100	Smoko hosted by the Environmental Department
1100 - 1130	Update from Environmental Department
1130 - 1200	Tax Office update
1200 - 1300	Lunch sponsored by Stanley Service Ltd
1300 - 1330	Chief Executive Address TBC
1330 - 1430	Your Government & You
1430 - 1500	MLA update on the budget
1500 - 1530	Smoko hosted by Gilbert House
1530 - 1630	MLA Q&A session chaired by Lewis Clifton

FRIDAY 9th July

0900 - 0930	Weed control on your farm - Sally Poncet
0930 - 1000	Salmon Farming & Marine Management Emma Hart Falklands Conservation
1000 - 1030	Recognise, protect, restore - driving solid stewardship of Falklands peat/ wetlands - David Higgins FC
1030 - 1100	Water retention, changes and challenges - David Roberts Water Plant
1100 - 1130	Smoko hosted by Cancer Support Trust
1200	Lunch TBC
1300 - 1400	Committee wash up meeting
1530 - 1630	WoolCo AGM - WoolCo Members Only
2100	Camp Ed Dance at the Town Hall

Thank you to everyone who hosted, sponsored, presented and supported this years Farmers Week.

PUZZLE PAGE!



		First Names				License Plates				Wedding Gifts			
		Daniella	Harmony	Mathew	Michael	JTR-500	PLX-819	SPR-413	VGN-789	blender	cutlery set	juice press	toaster
Wedding Years	1938												
	1961												
	1965												
	1971												
Wedding Gifts	blender												
	cutlery set												
	juice press												
	toaster												
License Plates	JTR-500												
	PLX-819												
	SPR-413												
	VGN-789												

Logic puzzles require the solver to deduce the relationships between different people, places and things based on a limited number of clues given in the puzzle. Remember: every item on the board belongs to one and only one person, no item will ever be shared. Using only the clues provided and simple deductive logic and reasoning, fill in the grid with X's and O's to determine the solution.

Logic Puzzles

Presented by Puzzle Baron

Puzzle ID: Z344KI

For hints, solutions and more puzzles, go to www.Printable-Puzzles.com!

Wedding Years	First Names	License Plates	Wedding Gifts
1938			
1961			
1965			
1971			

1. The person married in 1961 loved the toaster they received.
2. The person married in 1938 has the PLX-819 license plate.
3. The person who received the cutlery set is not Daniella.
4. The person who received the cutlery set got married after Harmony.
5. The person married in 1965 doesn't have the VGN-789 license plate.
6. The person married in 1971 is Daniella.
7. Harmony didn't receive the blender and doesn't have the SPR-413 license plate.
8. The driver with the JTR-500 license plate got married before the driver with the VGN-789 license plate.
9. Of the person who received the toaster and Mathew, one got married in 1961 and the other has the PLX-819 license plate.
10. Either the person who received the juice press or the person who received the toaster is Mathew.

	1		9				5	
6				1				
2		7	8			4		
					3			
	4	5	6					
1			7	8				
	2	4					7	1
	8		4					3
5			3			6	9	

7				2		8		
		2						9
3					8		7	4
			3	5		7		2
				1			4	6
					6	9	3	
			4					
2	3	1	8					
9		4						